



# Garden of Eden

A 9 Star rated, practical Wembley home points to a new way of sustainable living for West Australians.

// **words** rocky amatulli

With a reported 63 percent of all Western Australians becoming more concerned about their power bills, it is some reprieve that all new homes in Western Australia are now built to a 6 Star rating. Some people are embracing this shift to gain (and help others gain) a competitive advantage. Ex-real estate agent Marc Drexel, director of ARCeden and ARCActive, is one of those people. Marc has built his first 9 Star energy rated development - his own home. The home was a finalist in the Housing Industry Association's Green Smart category, and attracted more than 400 people to its opening as part of the Sustainable September series.

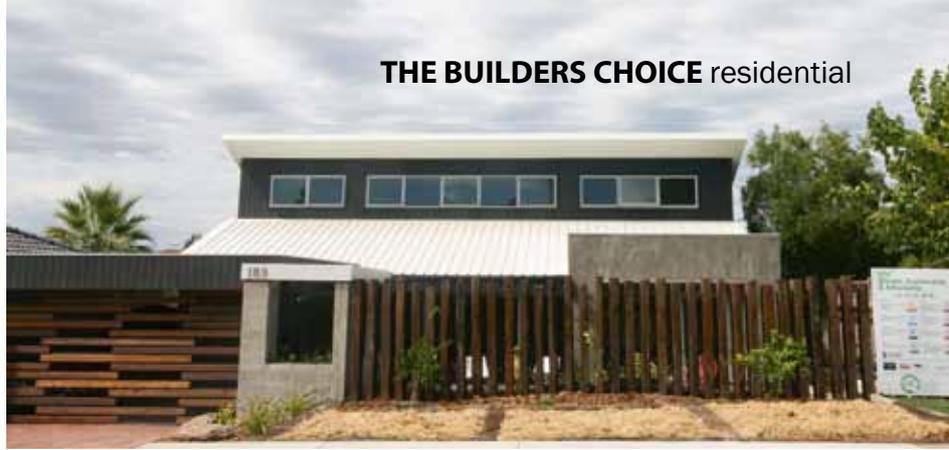
The home a four-bedroom, two-bathroom residence (which includes a separate study) is divisible into two separate living areas which are suitable for retirees, professional couples, or a family with small children. The home focuses on "embodied sustainability" so that it is not only built with the environment in mind but is also extremely efficient with regard to ongoing energy and maintenance requirements...or more so the minimisation thereof.

The design of the home is where the sustainability starts. The exterior utilises products and materials which are practical, had a low carbon footprint to produce, require little maintenance, and/or have been salvaged and therefore have not had to be manufactured specifically for this project. Simple blockwork and concrete finished walls and recycled timber all form part of the exterior fabric of the home, whilst having the benefit of adding interest and texture to a design which is simple,

THE TEAM



LUCKY STRIPE DESIGN LOGO?



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geometric, and uncluttered. What then overlays this exterior are the plants and gardens which add to the sustainability of the home in various ways – by shading, or by contributing edible produce (by way of the front verge vegetable and herb garden). Even the selection of many of the plants growing on the property has been carefully considered insofar that many of them are not only native to Australia, but native to the suburb itself. Whilst the property does not have an instant garden (which again would require considerable resource and wastage to achieve) the garden will develop naturally and improve energy performance of the home with time. As with most things, preparation is often the key to success. This goes as far as what Marc refers to as “the unsexy end of sustainability” – preparing and conditioning the soil before planting. This demonstrates one of the underlying principles of sustainability, that is, that a combination or compounding of actions and decisions can make all the difference.

“Our home is often the last bastion of impracticality,” says Marc. “We as consumers need to become empowered, and we do that with the choices we make. What I believe that ARCCeden is developing is what I refer to as a success driven model for the alpha generation. What we are doing as a society is leaving behind a toxic legacy. It is easy to ‘greenwash’ a project and pretend that we really believe it to be sustainable, but true sustainability goes much deeper than that. And whilst there are some great tools available, most of those tools have previously sat in isolation. What we have been able to do via ARCCactive, is to create a rating system which considers and combines seven indices.”

Marc’s approach to his own home then, was to make the house work first and then bolt on the facade and other treatments, as opposed to doing the opposite. For example the house has no passages or hallways. Whilst most people would be reluctant to forego these in their own home, it is possibly out of habit and expectation rather than necessity that these wasted areas are included in many homes. “As long as there is no transfer of noise between adjoining rooms and access to each of those rooms is easy and practical, then what purpose

do hallways serve?,” asks Marc. It is actually a difficult question to answer, when asked!

Marc’s other criticism is that many people get caught up in chasing “stars”. What he felt was needed was a more balanced set of measurements and results, which is why ARCCactive developed its own rating system which has now been adopted by one leading real estate firm and one of the busier local councils in Western Australia (who acknowledge that having an ARCCactive rating can provide a simple yet comprehensive overview of the performance of a development or home).

The home was designed with the rating system which ARCCactive devised, and therefore incorporates considerations across seven different categories: property fixtures (that conserve and produce energy), fixtures and appliances (that conserve and reuse water), liveability (considering the building life and energy content), materials (factoring in finishes, their use, and how they impact on human and environmental health), community (proximity to parks and local amenities), nature (type amount of diversity of vegetation), and transport (encompassing walking cycling and public transport). The combined rating is known as the ‘Eco-nomics’ rating of the home, which in this case is 9 Stars.

In creating his 9 Star home, Marc systematically addressed each of those seven categories with tried and tested technology and solutions. However it is the way in which many small things contribute to the sustainability of home, the really make the biggest difference over a period of time. For example central switches which turn all the lights off from one point can save homeowners up to four percent of their annual power bill. Even through the use of innovative benchtop material such

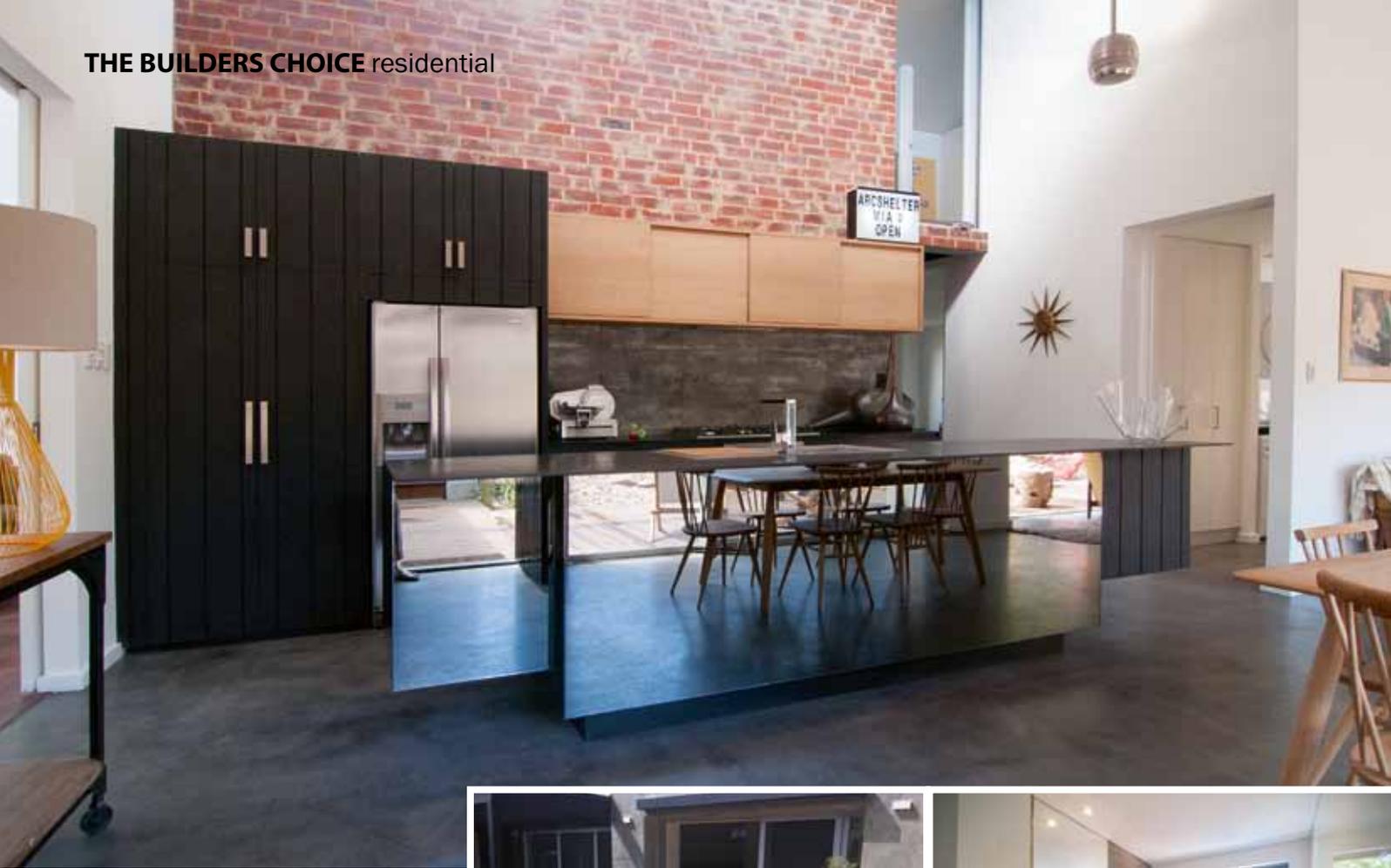
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Ph: 13 15 40

A glass, glazing and window manufacturing company

Ph: 08 9434 4311 E: info@svglass.com.au  
Unit 1/14 Renewable Chase, Bibra Lake WA 6163  
[www.svglass.com.au](http://www.svglass.com.au)



as "Paperock" (which costs similar to other laminated board products currently used) can make the difference. The product is incredibly sustainable in its manufacture and is extremely serviceable and durable. Furthermore, no special processes are required for working or installing the product. Marc was so impressed with the product, he has become the state distributor for it.

The home's internal temperature is extremely stable and comfortable all year-round. The home does not have any air-conditioning as it does not require any. There is some supplementary heating that is rarely used. The internal temperature of the home can be further controlled through the use of ceiling fans. There are large areas of exposed brickwork located high up and pick up heat from northern sun entering via highlight windows. This heat is then radiated back into the home due to the thermal mass of the brickwork.

Even the selection of appliances was carefully considered. Whilst Marc admits that whilst historically they would not have been his first choice, this time he chose appliances which clearly outweighed many other brands when considering the environmental impact during their manufacture and subsequent running. And at the end of the day, they still do what they need to, so there is no disadvantage or compromise as far as the homeowner is concerned. "Consumers should ask themselves

what role does a house play, but also what role do they play when it comes to sustainability?"

Anthony Pillinger (director of Swell Homes which built the home) comments that whilst the home was enjoyable to build, it did not provide any unusual difficulties. "It was really just an application of some of the most recent building materials, coupled with the old school ones," says Anthony. "Working with Solarspan for the first time on this job was very interesting. Understanding how to get the services throughout the house with Solarspan as a roof was a little tricky, but we managed without any problems. Basically, the home is an example of composite construction through and through. It essentially has a honed concrete slab, concrete block face work outside and plastered inners, with some reverse brick veneer to the front and shadowclad walls to the upper level. Good things do really come in sensibly sized packages."

And while Marc loves living in his home, it is currently on the market because ARCeden is moving on to a more ambitious project - what Marc refers to as "the green cell collective". This project is like a townhouse development with a sustainable value overlay. In fact, it will be very much like a traditional village. **BC**

ARCeden/ARCactive: 0412 928 504, [www.arceden.net](http://www.arceden.net)

Swell Homes: 0438 388892, [www.swellhomes.com.au](http://www.swellhomes.com.au)

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# Marc drexel

## profile photo

# up close + personal with marc drexel

DIRECTOR, ARCEDEN & ARCACTIVE

// interviewed by rocky amatulli



### How did you get into the industry?

I spent around 30 years working in property and real estate in some of the most affluent suburbs in Perth. As a real estate agent I helped many people buy and sell very large homes – what I refer to as McMansions! Indeed, I lived in one of them. Needless to say, these homes were very energy hungry, and were therefore not particularly sustainable in their design or running. By way of total contrast, I also worked for a national real estate company in rural Western Australia. Here I got to experience first-hand some of the effects of climate change on the environment. Reflecting on that entire part of my life and career, I became acutely aware of the limitation and cost of valuable resources such as water and fuels used for heating and cooling homes. It was at this point that I made a decision to change my way of life, and in doing so, help others to do the same. I then went on to form ARCeden. However rather than fight “the system” (referring to how the real estate and property markets work), I used that to my advantage and the advantage of my clients.

### What does your organisation do?

ARCeden is a sustainable property consultancy. My consultancy fulfils a number of roles relating to sustainable housing and developments. It assists people in sourcing appropriate sites, developing designs, and then building sustainable homes. Whilst “sustainability” clearly incorporates what are becoming more understood and accepted aspects of conserving resources and minimising wastage, to me sustainable living also includes creating homes for people that are located within walking distance of amenities (or their favourite bar after a night out drinking when they shouldn't be driving), connect with nature, and are located in a community which is safe. Many of these aspects are often ignored or are not considered when people think of sustainable homes and living. My intention was to utilise my skills and experience to help people combine three important factors into their homes: affordability; sustainability; and style.

### Where do you draw your inspirations from?

Some of my thinking actually draws on my personal interest in anthropology and in particular the Aboriginal culture and their spirituality. As a culture, they have outlived many other (supposedly more civilised and educated) cultures such as the Egyptians and the Mayans, but have done so with a minimum of resources and in a particularly harsh environment. When we ask ourselves why this is so, some of the answers lie in their self-sustainability and connection with their environment– which they choose to work with, rather than against. I think that we can all learn a great deal from this observation. I also draw inspiration from Europe. As a far older “Westernised” continent than our own, many countries in Europe have managed to retain the village way of life. It was here that I was able to experience first hand the connection between people within the community space – what I refer to as “the values of humanity”.

### Is that how design and construction of your own home in Wembley came about?

Yes. Given what I had learned and what I knew I still had to learn, I decided to make myself the experiment. It really was a case of putting my money where my mouth was if I was to make real changes myself. It was only then that I felt I could help others make changes in the way they live their lives. And to me, small changes are better than no change at all. Better to make a 10 percent difference to 90 percent of people than the other way round. The exciting thing about all this for me is that consumers nowadays are becoming more educated. They are questioning things more. They are starting to dictate more. They are mean to say “no!” This inevitably pushes boundaries and leads to change anyway. If I can educate people on the way and facilitate that change, then all the better.

### How has the response to your home, and indeed ARCeden been?

Very positive indeed! The extension of what I've done has also been to develop ARCActive, resulting in a rating system which we have developed. Our rating system provides a “matrix of meaning” which connects over seven indices. It is what we refer to as “Eco-nomics”. What this has done is that it has helped to break down the confusing language of sustainability, particularly when with respect to building. This rating system has been adopted by the City of Vincent, and one major real estate company within the western suburbs of Perth. What I'm delighted about is at our rating system takes the salesperson out of the equation. It means that assessment of homes can be based on quantifiable measures. What this does the homeowner is allows them to future-proof their asset.

### What are some of the challenges that you face?

I think one of the biggest challenges is lack of education. Even when I worked in rural Western Australia, I was astounded by not only what I saw was happening to the environment but by the lack of knowledge that people living in those areas had about what was happening around them. So I made it my mission to educate myself. Now my mission is to educate others, which is never easy. I believe the key to sustainability lies in accepting responsibility for our own actions and working with integrity. This is not as always something that other people want to do. Therein, lays the challenge. However I am totally committed to the belief that we can all make a difference and accordingly, we can all benefit. That is what drives me to meet this challenge head-on.

### Is this is what you would like to be remembered for?

It certainly is. I believe that we are all really just carers of this place we occupy, and that we leave a legacy. Some cultures believe that our legacy lasts seven generations. If that is so, then we should consider very carefully our actions. We live in a society of excess, and I think it is time that we ask ourselves “when is enough, enough... and what do we do with all that excess?” It's up to us! **BC**